

# HY-8 Culvert Analysis Report

## Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow

Minimum Flow: 0 cfs

Design Flow: 46.69 cfs

Maximum Flow: 52.43 cfs

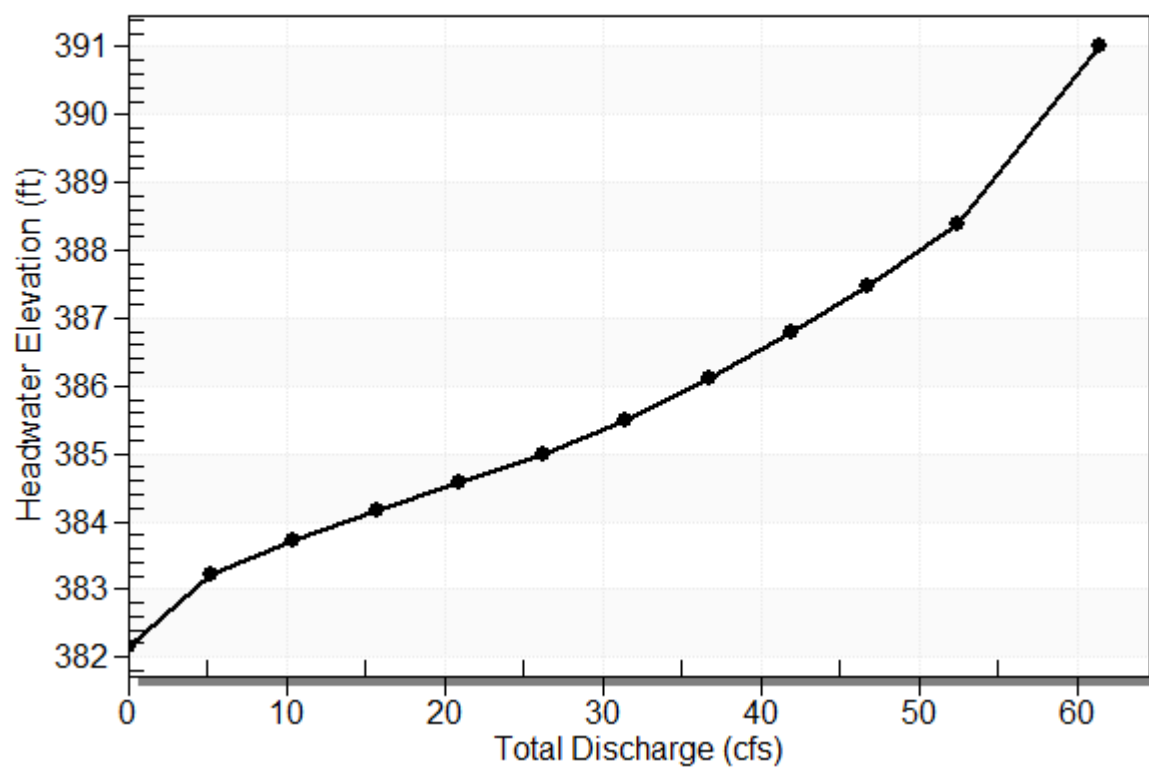
**Table 1 - Summary of Culvert Flows at Crossing: Crossing 36**

Headwater Elevation (ft)	Total Discharge (cfs)	Lt. Sta. 576+67 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
382.17	0.00	0.00	0.00	1
383.21	5.24	5.24	0.00	1
383.72	10.49	10.49	0.00	1
384.16	15.73	15.73	0.00	1
384.57	20.97	20.97	0.00	1
384.98	26.22	26.22	0.00	1
385.49	31.46	31.46	0.00	1
386.12	36.70	36.70	0.00	1
386.80	41.94	41.94	0.00	1
387.48	46.69	46.69	0.00	1
388.39	52.43	52.43	0.00	1
390.00	61.44	61.44	0.00	Overtopping

## Rating Curve Plot for Crossing: Crossing 36

### Total Rating Curve

Crossing: Crossing 36



**Table 2 - Culvert Summary Table: Lt. Sta. 576+67**

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
0.00	0.00	382.17	0.000	0.000	0-NF	0.000	0.000	0.100	0.000	0.000	0.000
5.24	5.24	383.21	0.969	1.035	3-M1t	0.830	0.714	1.020	0.920	2.473	0.000
10.49	10.49	383.72	1.402	1.551	3-M1t	1.193	1.023	1.629	1.529	2.675	0.000
15.73	15.73	384.16	1.776	1.988	3-M1t	1.505	1.263	2.017	1.917	3.112	0.000
20.97	20.97	384.57	2.099	2.398	3-M1t	1.800	1.471	2.360	2.260	3.516	0.000
26.22	26.22	384.98	2.383	2.812	3-M1t	2.107	1.648	2.674	2.574	3.941	0.000
31.46	31.46	385.49	2.649	3.316	7-M1t	2.487	1.816	2.978	2.878	4.455	0.000
36.70	36.70	386.12	2.914	3.953	4-FFf	3.000	1.966	3.000	3.177	5.192	0.000
41.94	41.94	386.80	3.189	4.629	4-FFf	3.000	2.107	3.000	3.505	5.934	0.000
46.69	46.69	387.48	3.456	5.309	4-FFf	3.000	2.223	3.000	3.830	6.605	0.000
52.43	52.43	388.39	3.811	6.963	4-FFf	3.000	2.351	3.000	4.259	7.417	0.000

\*\*\*\*\*

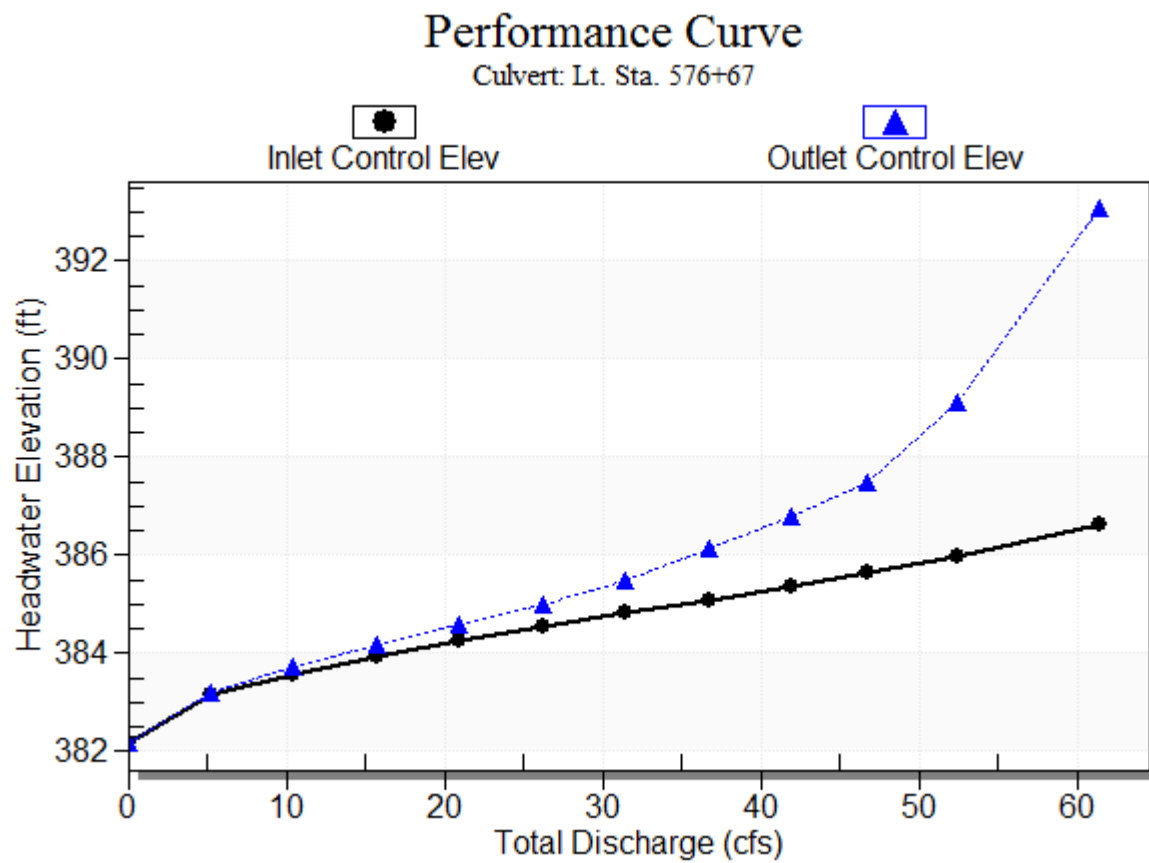
Straight Culvert

Inlet Elevation (invert): 382.17 ft,    Outlet Elevation (invert): 381.71 ft

Culvert Length: 247.10 ft,    Culvert Slope: 0.0019

\*\*\*\*\*

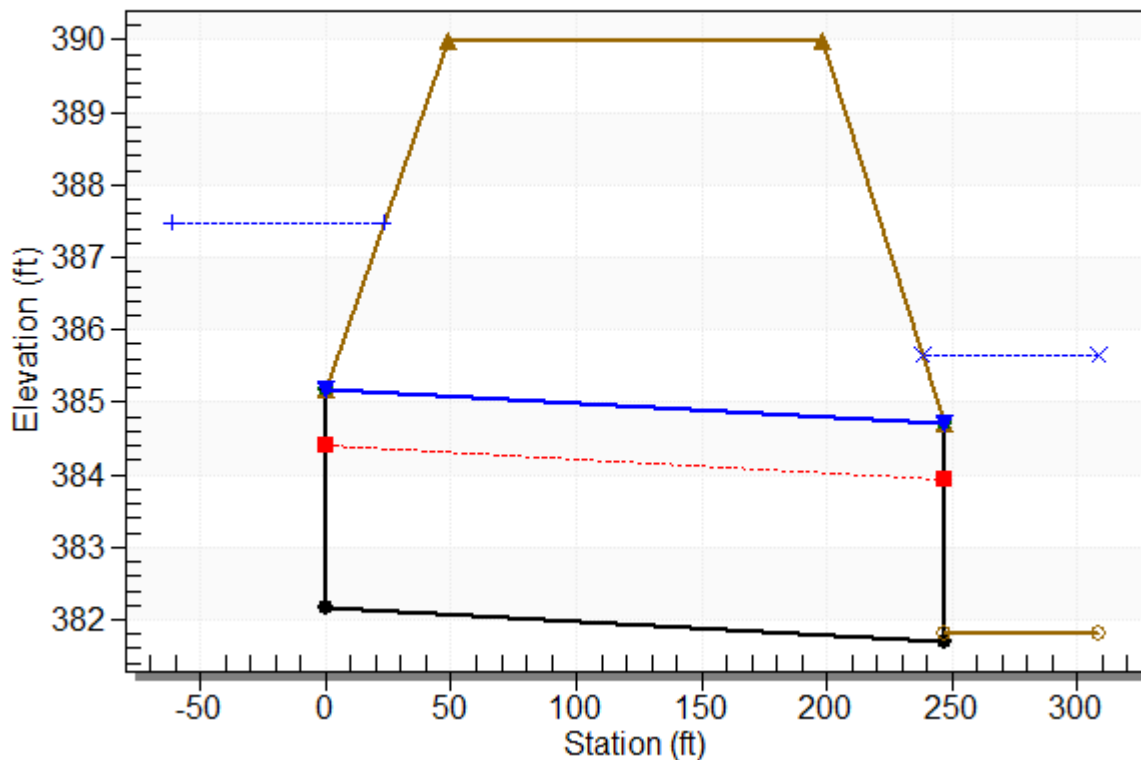
Culvert Performance Curve Plot: Lt. Sta. 576+67



## Water Surface Profile Plot for Culvert: Lt. Sta. 576+67

Crossing - Crossing 36, Design Discharge - 46.7 cfs

Culvert - Lt. Sta. 576+67, Culvert Discharge - 46.7 cfs



### Site Data - Lt. Sta. 576+67

Site Data Option: Culvert Invert Data

Inlet Station: 0.00 ft

Inlet Elevation: 382.17 ft

Outlet Station: 247.10 ft

Outlet Elevation: 381.71 ft

Number of Barrels: 1

### Culvert Data Summary - Lt. Sta. 576+67

Barrel Shape: Circular

Barrel Diameter: 3.00 ft

Barrel Material: Concrete

Embedment: 0.00 in

Barrel Manning's n: 0.0120

Culvert Type: Straight

Inlet Configuration: Grooved End Projecting

Inlet Depression: NONE

**Table 3 - Downstream Channel Rating Curve (Crossing: Crossing 36)**

[illegible]

[illegible]

[illegible]

### **Tailwater Channel Data - Crossing 36**

Tailwater Channel Option: Enter Rating Curve

Channel Invert Elevation: 381.81 ft

### **Roadway Data for Crossing: Crossing 36**

Roadway Profile Shape: Constant Roadway Elevation

Crest Length: 100.00 ft

Crest Elevation: 390.00 ft

Roadway Surface: Paved

Roadway Top Width: 150.00 ft